BRAYTRON S.R.L

CE LVD REPORT

Applicant:	BRAYTRON S.R.L B.DUL IULIU MANIU, NR.616, CORP B, ETAJ 1 SECTOR 6, 061129,BUCHAREST,ROMANIA
Product Name:	LED TUBE
Trade Name:	**BRAYTRON**
Main Test Model:	BA52-01583
Additional Model:	See Annex B
Prepared By :	BST Testing (Shenzhen)Co., Ltd No.7, New Era Industrial Zone, Guantian, Bao'an District, Shenzhen, Guangdong, China
Test Date:	Dec.30, 2021–Jan.07, 2022
Date of Report:	Jan.07, 2022
Report No.:	BSTXD220121069203SR

TEST REPORT

EN 62560

Self-ballasted LED-lamps for general lighting services by voltage > 50 V – Safety specifications

Testing Laboratory Name	BST Testing(Shenzhen)Co., Ltd
Address	No.7, New Era Industrial Zone, Guantian, Bao'an District, Shenzhen, Guangdong, China
Testing location……:	BST Testing(Shenzhen)Co., Ltd
Applicant's Name	BRAYTRON S.R.L
Address	B.DUL IULIU MANIU, NR.616, CORP B, ETAJ 1 SECTOR 6, 061129,BUCHAREST,ROMANIA
Manufacturer …… ……:	DEMGRUP INTERNATIONAL LIGHTING LIMITED
Address …… ……:	UNIT D 16/F, ONE CAPITAL PLACE, 18 LUARD ROAD, WAN CHAI, HONG KONG
Test specification	N/A
Standard.....	EN 62560:2012/A11:2019
Procedure deviation	N/A
Non-standard test method	N/A
Test item description	See page 1
Trade Name.....	See page 1
Model and/or type reference	See page 1
Rating(s).....	See label

Test case verdicts:

Test case does not apply to the test object ... :	N(/A)
Test item does meet the requirement .....:	P(ass)
Test item does not meet the requirement ..... :	F(ail)

General remarks:

This report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item(s) tested.

"(see remark #)" refers to a remark appended to the report.

"(see Annex #)" refers to an annex appended to the report.

General product information:

The series products have the same LED modules. The differences are the Luminaires model name and power, so, we select BA52-01583 to test.

Artwork of Marking Label:

Prepared by : Eidy Hu

Engineer

Reviewer : Jacky Zhang

Supervisor

Approved & Authorized Signer :

Manager

EN 62560			
Clause	Requirement + Test	Result - Remark	Verdict
4	General requirements and general test requirements		P
4.1	The lamps shall be so designed and constructed that in normal use they function reliably and cause no danger to the user or surroundings.		P
4.2	Self-ballasted LED-lamps are non-repairable, factory-sealed units. They shall normally not be opened for any tests. In the case of doubt based on the inspection of the lamp and the examination of the circuit diagram, and in agreement with the manufacturer or responsible vendor, either the output terminals shall be short-circuited or, in agreement with the manufacturer, lamps specially prepared so that a fault condition can be simulated shall be submitted for testing (see Clause 13).		P
4.3	all tests are carried out on each type of lamp or, where a range of similar lamps is involved, for each wattage in the range or on a representative selection from the range, as agreed with the manufacturer.		P
4.4	When the lamp fails safely during one of the tests, it is replaced, provided that no fire, smoke or flammable gas is produced. Further requirements on failing safe are given in Clause 12.		P
5	Marking		P
5.1	Lamps shall be clearly and durably marked with the following mandatory markings:		P
	a) mark of origin (this may take the form of a trademark, the manufacturer's name or the name of the responsible vendor);	see page 3	P
	b) rated voltage or voltage range (marked "V" or "volts");	220-240V~	P
	c) rated wattage (marked "W" or "watts");		P
	d) rated frequency (marked in "Hz").	50/60Hz	P
5.2	Addition marking		P
	- rated current (A)..... :		P
	- weight significantly higher		N
	- special conditions or restrictions		P
	Not suitable for dimming; symbol used		P
	- not suitable for water contact		N
5.3	Marking durable and legible		P

	rubbing 15 s water, 15 s petroleum; marking legible		P

6	**INTERCHANGEABILITY**		**P**
6.1	Cap interchangeability in accordance with IEC 60061-1		P
	Gauge in accordance with IEC 60061-3		P
6.2	Bending moment and mass imparted by the lamp at the lampholder		P
	Bending moment imparted by the lamp at the lampholder (Nm)..... :	2Nm	P
	Mass not exceeding value table 2 or as specified in IEC 60061-1 (kg).....:		P

7	Protection against accidental contact with live parts		P
	Internal, basic insulated or live metal parts not accessible		P
	Tested with a test finger with a force of 10 N		P
	Compliance checked with appropriate gauges		P

8	Insulation resistance and electric strength after humidity treatment		P
8.1	General		P
8.2	Insulation resistance		P
8.3	Electric strength		P

9	Mechanical strength		P
9.1	Lamps shall be able to withstand the relevant mechanical strength tests as given in 9.2.		P
9.2	Torsion resistance of unused lamps		P
9.2.1	Torque test		P
	B15d or E14 Cap..... 1,15 Nm		N
	B22d, E26, E26d or GX53 Cap.....3,0 Nm		P
	E11 or E12 Cap.....0,8 Nm		N
	E17 Cap.....1,5 Nm		N
	E39 or E40 Cap.....5,0 Nm		N
	GX53 Cap.....3,0 Nm		N
9.3	Compliance criteria		P
	Clause 8 shall comply after the mechanical strength test.		P
9.4	Axial strength of Edison caps		P
	After full insertion into the gauge an axial force of Table 4 is applied to the central contact (N).....:	120N	P

	The insulation around the central contact shall remain intact		P

10	Cap temperature rise		P
	The cap temperature rise Δt_s of the lamp shall not exceed 120 K.	60.5K, limit 120K	P

11	Resistance to heat.		P
	Parts of insulating material providing protection against electric shock, retaining live parts in position, ball-pressure test:		P

12	Resistance to flame and ignition		P
	External parts of insulating material preventing electric shock glow-wire test 650 °C		P

13	Fault conditions		P
13.2	Fault conditions: where diagram indicates fault condition impairs safety, electronic components have been short-circuited or disconnected		P
13.3	When operated under fault conditions the lamp		P
	- does not emit flames or molten material		P
	- does not produce flammable gases or smoke		P
	- live parts not accessible		P
	After the tests the insulation resistance with d.c. 1000 V complies with requirements of Cl. 8.1 :		P

14	Creepage distances and clearances		P
	Creepage distances and clearances according to IEC 61347-1	Cr.>5.0mm, Cl. >5.0mm	P
	Conductive accessible parts according to IEC 60598-1		P

15	Abnormal operation		P
	Non-dimmable self-ballasted lamps are tested on a dimmer or an electronic switch according the test circuit shown in Figure 8		P
	Operate the lamp for 8 h at most onerous dimming level		P
	When operated under abnormal operation the lamp		P
	- does not catch fire		P
	- does not produce flammable gases		P
	- live parts not accessible		P

16	Test conditions for dimmable lamps		N
	Test are carried out at maximum power setting for Clause 10 and Clause 17		N

17	Photobiological safety		P
17.1	UV radiation		P
	The ultraviolet hazard efficacy of luminous radiation of an LED lamp shall not exceed 2 mW/klm.		P
17.2	Blue light hazard		P
	The blue light hazard shall be assessed according to IEC TR 62778, which shall be regarded as normative when testing LED lamps to this standard. LED lamps shall be classified as risk group 0 unlimited or risk group 1 unlimited.	RG0	P
17.3	Infrared radiation		P
	LED lamps are not expected to reach a level of infrared radiation where marking or other safety measurements are required.		P

18	INGRESS PROTECTION		N
18.1	Lamps shall be suitable for water contact unless marked with Figure 6		N
18.2	The lamp is subjected to an IPX4 test according to IEC 60598-1		N
	The lamp complies with the compliance provisions of 9.2 of IEC 60598-1		N
	Lamps constructed so that it is sealed to exclude water need not to be tested		N

ANNEX 1	Components				P
Object / part No.	**Manufacturer/ trademark[2)]**	**Type / model[2)]**	**Technical data**	**Standard**	**Mark(s) of conformity[1)]**
LED	JIANGSU PRAJNA ELECTRONIC INDUSTRIALCO.,LTD	2835	V_F=3,2 V; I_F= 60 mA; 0,2 W; 6500K/4000K/3000K	IEC/TR 62778	Tested in appliance
Cap	Nantong Orient Plastics CO.,LTD	G13	PBT φ28*50mm(UL/E332375)	EN 62776	Tested in appliance
PCB for LED module	GUANGDONG YONGCHUANGXIN ELECTRONICS CO LTD	ycx-2	V-0; T105; UL (E480435)	EN 62776	Tested in appliance
PCB for LED driver	ZHEJIANG LEUCHTEK TECHNOLOGY CO LTD	PCEM-3	V-0; 130 ºC; UL (E199273)	EN 62776	Tested in appliance
Fuse resistor on driver PCB	SHENZHEN GREAT ELECTRONICS CO LTD	RXF	4.7 Ω;1 WS (UL/E301541)	EN 62776	Tested in appliance
Tube	YIZHENG Signify	Glass tube	26*1498mm	IEC 62776	Tested in appliance

Annex 2	(normative) Lamps with operating position limitations (see 5.2)	N

Table 8.2	Title: Insulating resistance		**P**
Test comments	Location		Insulation resistance (MΩ)
	Between	And	
	L	N	>100MΩ
	Live parts	Enclosure	>100MΩ

Table 8.3	Title: Electric strength			**P**
Test comments	Location		Test voltage	Breakdown
	Between	And		
	Live parts	Enclosure	3000V	No
	Live parts	Mounting surface	3000V	No

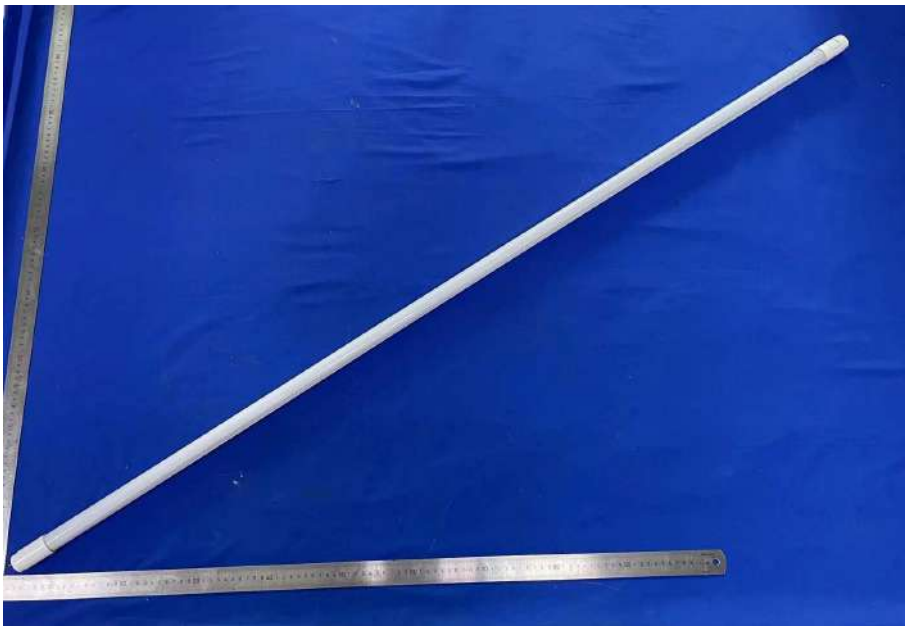
Table 11	Title: Ball pressure			Results
				P
Test comments	Parts	Test temp. (℃)	Impression diameter (mm)	Limits (mm)
	Enclosure	75	0.92	2

Table 12	Title: Glow wire test		**P**
Test comments	Parts	Test temp. (℃)	Results
	Shade	650	Any flame or glowing extinguish within 30s
	Enclosure	650	Any flame or glowing extinguish within 30s

Table 13	TABLE: tests of fault conditions		**P**
Part	Simulated fault	Test voltage	Hazard
C1	Short-circuit	242V	No
Output	Short-circuit	242V	No

ANNEX A:

Photo-documentation



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Annex B

Additional Model :

BA52-0068X, BA52-1068X, BA52-2068X, BA52-3068X, BA52-4068X, BA52-5068X, BA52-6068X, BA52-7068X, BA52-8068X, BA52-9068X, BA52-0128X, BA52-1128X, BA52-2128X, BA52-3128X, BA52-4128X, BA52-5128X, BA52-6128X, BA52-7128X, BA52-8128X, BA52-9128X, BA52-0158X, BA52-1158X, BA52-2158X, BA52-3158X, BA52-4158X, BA52-5158X, BA52-6158X, BA52-7158X, BA52-8158X, BA52-9158X, BA52-00680, BA52-00681, BA52-00683, BA52-10680, BA52-10681, BA52-10683, BA52-20680, BA52-20681, BA52-20683, BA52-01280, BA52-01281, BA52-01283, BA52-11280, BA52-11281, BA52-11283, BA52-21280, BA52-21281, BA52-21283, BA52-01580, BA52-01581, BA52-01583, BA52-11580, BA52-11581, BA52-11583, BA52-21580, BA52-21581, BA52-21583 (X=0,1,2,3,4,5,6,7,8,9)